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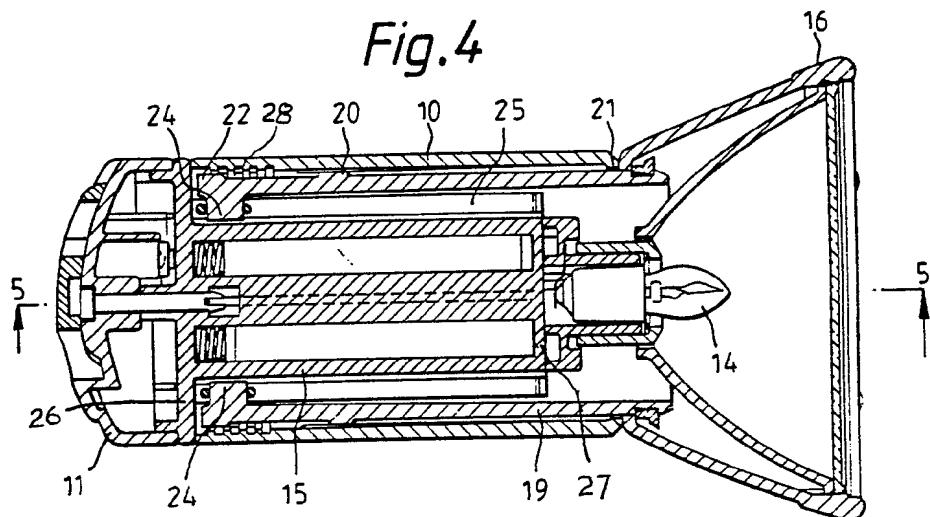
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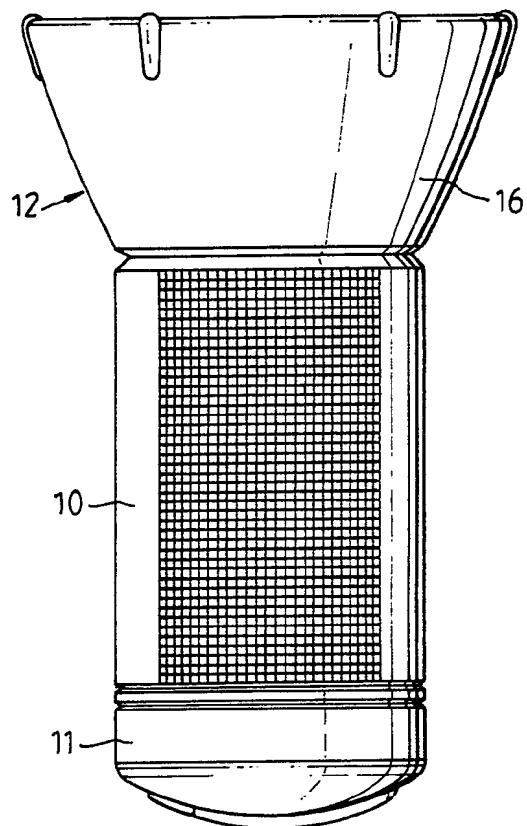
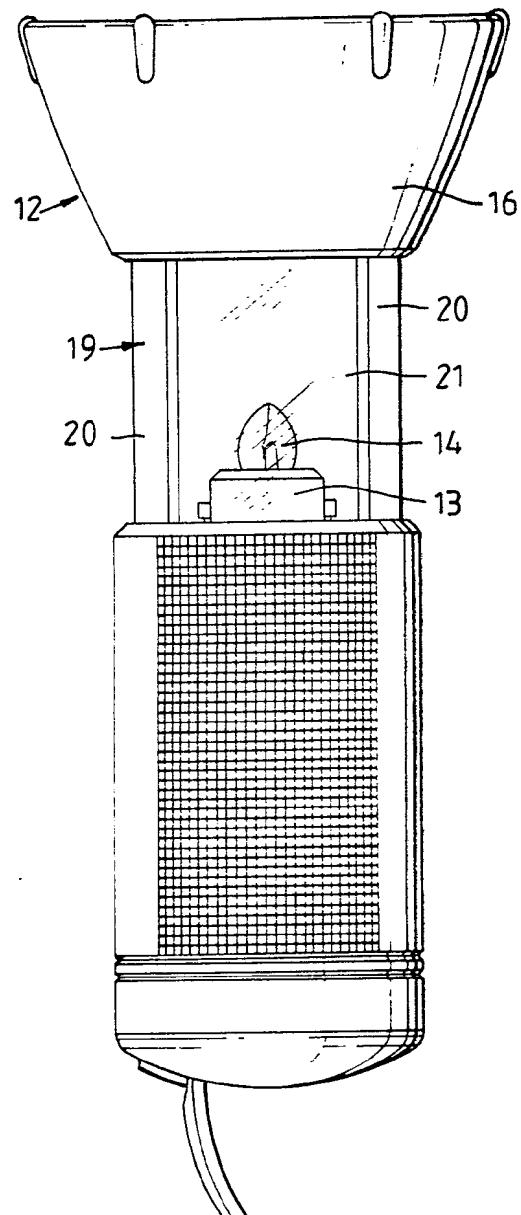
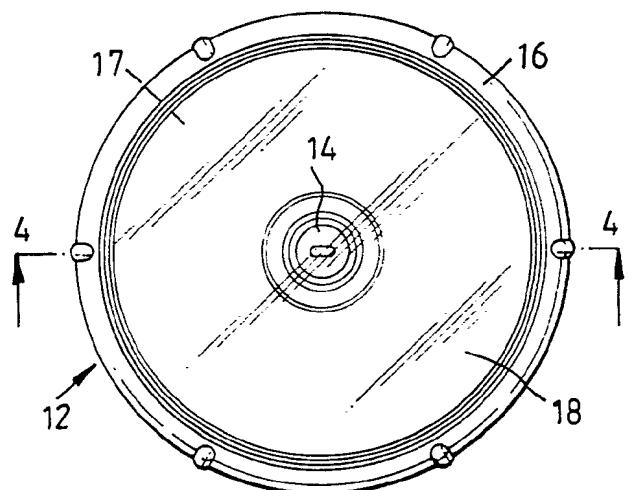
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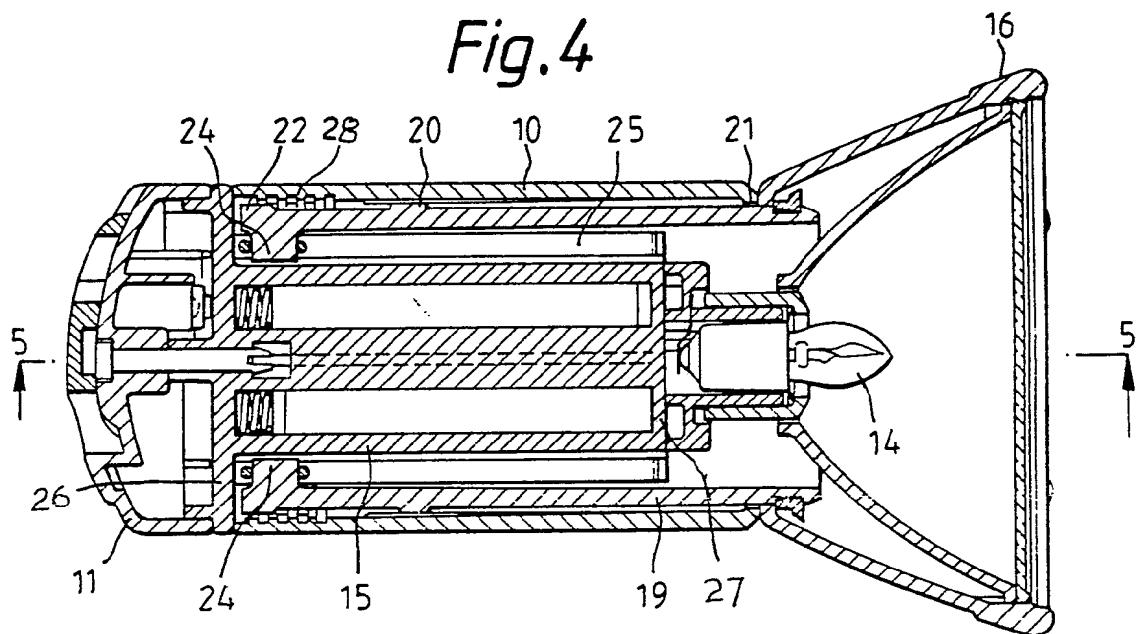
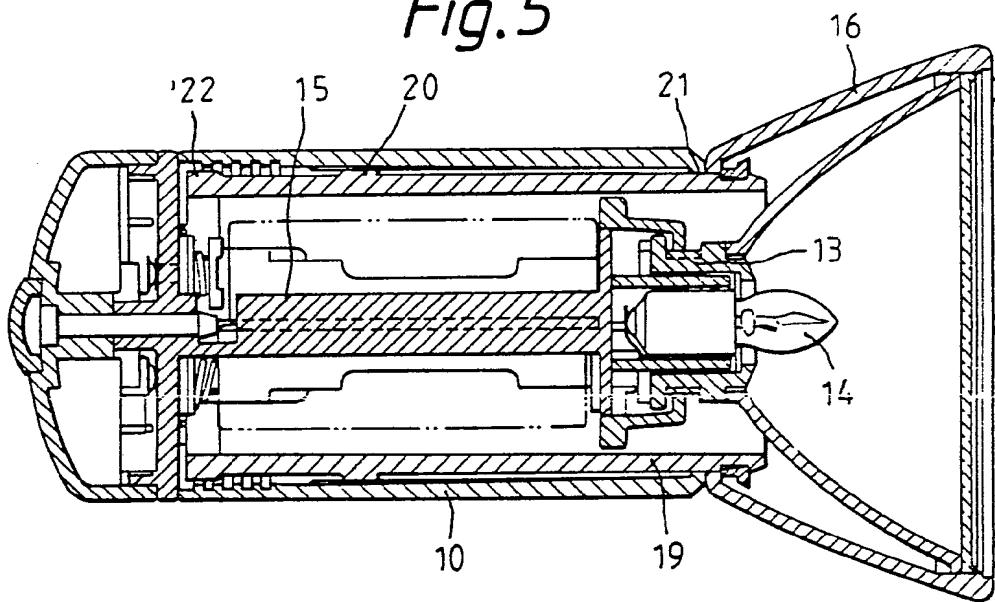
(54) Flashlights

(57) A flashlight has a head position which incorporates a reflector and which is disposed at the forward end of a stem 19 mounted for axial sliding movement in the barrel 10 of the flashlight. The stem is made from a translucent plastics material. When the stem is fully retracted into the barrel, the reflector extends about a bulb 14 disposed in a holder projective at the forward end of the barrel so that the light from the bulb is emitted forwardly both directly and by reflection. When the stem is pulled forward the head position including the reflector is disposed forwardly of the bulb and the light from the bulb is emitted laterally through the translucent material of the stem.

Fig. 4



*Fig.1**Fig.2**Fig.3*

*Fig.4**Fig.5*

FLASHLIGHTS

This invention relates to flashlights.

According to this invention, there is provided a flashlight comprising a housing for one or more dry cells, a light-bulb holder connected to the 5 housing means for selectively connecting the holder in circuit with the dry cell or cells which means includes an on/off switch, and a head assembly including a reflector which head assembly is connected to the housing and which is movable axially of itself relative 10 to the housing between a first position in which the head assembly extends about a bulb in the holder whereby light from the bulb is reflected forwardly and a second position in which the head assembly does not extend about the bulb whereby light from the bulb is 15 emitted laterally to illuminate the surroundings of the flashlight.

Preferably the head assembly when in said second position is disposed forwardly of the bulb.

According to a preferred feature of the 20 invention, the head assembly is mounted on a stem portion which is telescopingly mounted with respect to the housing and which is at least partly made from a translucent material through which light from the bulb passes in said second position of the head assembly. 25 In preferred constructions, a frame is provided for carrying the dry cell or cells, the frame and the cell or cells mounted thereon being removable from and replaceable in the housing as a unit and being surrounded by the stem portion when the head assembly 30 is in said first position.

One embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which:

Figures 1 and 2 show a flashlight according 35 to the invention with the head portion thereof, including a reflector and lens, in first and second

positions respectively,

Figure 3 is a front view of the flashlight.

Figure 4 is a sectional view on the line 4-4 of Figure 3, and

5 Figure 5 is a sectional view on the line 5-5 of Figure 4.

Referring to the drawings, a flashlight is shown which has a housing barrel 10, an end cap 11 in screw-threaded engagement on the rear end of the 10 barrel 10, and a head assembly 12. Opposite sides of the barrel have an impressed pattern to provide improved grip for the hand. A holder 13 for a light-bulb 14 is mounted on the forward end of the barrel. The barrel provides internally of itself locating means 15 for a frame unit 15 having end walls 26, 27 and which carries between the end walls a plurality of dry cells. The frame unit 15 provides electrical connections by which the cells are connected in circuit with an internal central contact (not shown) in the end cap 11 and an electrical contact on the bulb holder 13, such 20 that screwing and unscrewing the end cap through a small angle makes and breaks the electrical circuit through the bulb holder contact.

The head assembly 12 comprises a head portion 25 16 within which is located a reflector 17 and which carries a lens 18 at its forward end. The head portion is secured on the forward end of a stem 19 which is made from a translucent plastics material and is axially reeded on its external surface and which is 30 in linear sliding telescoping engagement in guides within the barrel. The stem extends about the frame unit and the dry cells so that the unit does not interfere with the axial sliding movement of the head assembly and stem. The stem has peripheral ribs 20, 35 22 on its external surface for engagement with the internal surface of the barrel 10, and an annular

inwardly directed lip 21 on the forward end of the barrel engagable by the forward rib 20 on the stem to support the stem in its sliding movement. Two radially inwardly directed pegs 24 at the inner end of 5 the stem engage in axial guideways 25 provided on the external surface of the frame unit to prevent rotation of the stem within the barrel.

When the head assembly is in its first position as shown in Figure 1, the stem is retracted 10 within the housing barrel 10, and the flashlight acts in the ordinary manner, light from the bulb being emitted forwardly either directly or by reflection. When the head portion 12 is pulled forwardly as shown in Figure 2, however, in which position rib 22 on the 15 rear end of stem 19 has come into sliding engagement with the internal surface of the barrel, and rib 20 comes into abutment with lip 21 to limit the forward movement, the head portion is disposed well forward of the bulb 14 and light from the bulb is directed laterally through the translucent stem 19 so as to give 20 more general illumination in the manner of a lantern.

Access to the dry-cells and the frame unit is obtained by turning the end cap 11 anti-clockwise beyond the "off" position. For this purpose, there are 25 provided four angularly spaced projections (not shown) extending axially from the end wall 26 of the frame unit 15 in a direction towards the head assembly 12. Slots (not shown) are formed in the rearward end of the stem 19 to slidably receive said projections. The 30 projections together define a part-cylindrical surface which is threaded to engage corresponding threads 28 on the inside cylindrical surface of the barrel 10. Thus, the barrel 10 is normally threadedly engaged with the frame unit 15, but may be released as described above 35 for battery replacement.

CLAIMS

1. A flashlight comprising a housing for one or more dry cells, a light-bulb holder connected to the housing, means for selectively connecting the holder in circuit with the dry cell or cells which means includes an on/off switch, and a head assembly including a reflector which head assembly is connected to the housing and which is movable axially of itself relative to the housing between a first position in which the head assembly extends about a bulb in the holder whereby light from the bulb is reflected forwardly and a second position in which the head assembly does not extend about the bulb whereby light from the bulb is emitted laterally to illuminate the surroundings of the flashlight.  
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2. A flashlight as claimed in claim 1, wherein the head assembly, when in said second position, is disposed forwardly of the bulb.  
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3. A flashlight as claimed in claim 2, wherein the head assembly is mounted on a stem portion which is telescopingly mounted with respect to the housing and which is at least partly made from a translucent material through which light from the bulb passes in said second position of the head assembly.  
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4. A flashlight as claimed in claim 3, wherein said stem has peripherally extending ribs arranged for sliding engagement with the internal surface of the housing to support the stem.  
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5. A flashlight as claimed in claim 4, wherein the external surface of at least the part of the stem which is exposed in said second position is otherwise patterned.  
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6. A flashlight as claimed in any one of claims 1 to 5, wherein a frame is provided for carrying the dry cell or cells, the frame and the cell or cells  
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- 35

mounted thereon being removable from and replaceable in the housing as a unit and being surrounded by the stem portion when the head assembly is in said first position.

- 5 7. A flashlight substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

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